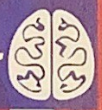
Physical Impact of Trauma

Brain Architecture

Shrinkage in prefrontal cortex, corpus callosum, and hippocampus. Enlarged and more reactive amygdala. **Resolution: safe and stable nurturing relationships, walk in nature, touch, exercise**

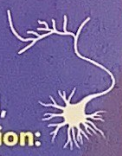


Brain Waves

Predomination of wrong brain waves in wrong part of the brain leads to anxiety, unable to concentrate, and seizures.
Resolution: neurofeedback

Neural Pathways

Need to 'rewire' our brain from old thought patterns and habits of mind, conscious, and unconscious. **Resolution: neurofeedback, meditation/ mindful action, positive self-talk**



Neurotransmitters

Vulnerable to addiction because dopamine transmitters/receptors not developed or damaged.
Reduces motivation & focus, creates fatigue.
Low serotonin causes depression.

Hormones

Prolonged high cortisol and ghrelin creates greater reactivity to stress. Long term damage to cells, structures of the body, and other hormone glands (thyroid).
Resolution: oxytocin ("the love hormone")

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Cellular Change

Shortens telomeres which prematurely ages and reduces reproduction of cells & can cause cancer. **Resolution: social support**

Epigenetics turns genes on or off in adaptation to dangerous environments. Effect can last generations. **Resolution: Safer environment (perception of)**

Toxin Elimination

Intestines and kidneys less able to eliminate toxins (slow gut or unbalanced flora).
Resolution: salt baths, sauna

Nervous System

Supercharged sympathetic nervous system or parasympathetic counterreaction meaning the body has difficulty coming into balance. **Resolution: yoga, breathing, or other physical/emotional regulation**

Immune System

Resistance to cortisol or lower cortisol creates unchecked inflammation. Cause of many diseases: asthma, arthritis, etc.)
Resolution: meditation/mindful action, walking in nature, diet, rest

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"What do I do?"

Trauma-Informed Support for Children

1 Create safety

If the child is overwhelmed, perhaps guide them to a quiet corner or allow them to decompress by visiting the restroom. If you are in a classroom, maybe you have a peace corner that you've outfitted with blankets or a screen so that it feels like a safe place.

2 Regulate the nervous system

Stress brings a predictable pattern of physiological responses and anyone who has suffered toxic stress or trauma is going to be quickly stressed into hyperarousal (explosive, jittery, irritable) or hypoarousal (depressed, withdrawn, zombie-like). No matter how ingenious our regulation strategies, how artsy-crafty we get with tools, the child has to find what works for them.

3 Build a connected relationship

This is the number one way to regulate the nervous system. When we are around people we care about, our bodies produce oxytocin, which is the hormone responsible for calming our nervous system after stress. If we stay connected, then eventually the calm discussion of each person's feelings and needs can take place.

4 Support development of coherent narrative

Creating predictability through structure, routines and the presence of reliable adults helps reduce the chaos a child may feel and allows them to start creating the kind of logical sequential connections that not only help them understand their own narrative, but are also the fundamental requirement of many types of learning.

5 Practice 'power-with' strategies

One of the hallmarks of trauma is a loss of power and control. When someone is wielding power over you with no regard to your thoughts or feelings, the toxic shame of the original trauma may come flooding back. As adults, we should use our power well. If we model a 'power-with' relationship with children it's our best chance of creating adults who will treat others with dignity and respect.

6 Build social emotional and resiliency skills

Trauma robs us of time spent developing social and emotional skills. The brain is too occupied with survival to devote much of its energy to learning how to build relationships and it's a good chance we didn't see those skills modeled for us. Learning to care for one another is the most important job we have growing up.

7 Foster post-traumatic growth

We know that there are qualities and skills that allow people to overcome the most devastating trauma and not just survive but find new purpose and meaning in their lives. Problem solving, planning, maintaining focus despite discomfort, self-control and seeking support are all known to lead to post-traumatic growth and are skills we can foster in children.

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